CASTLEMAINE NATURALIST

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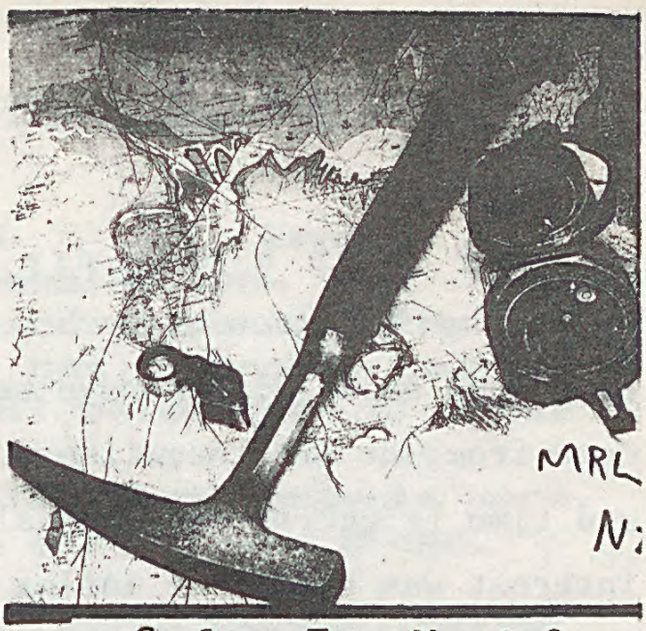
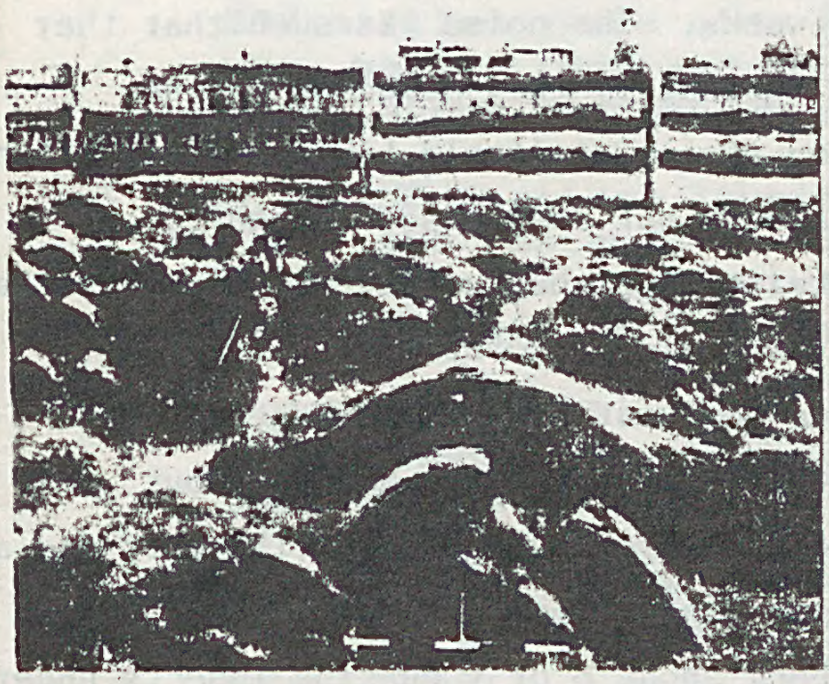
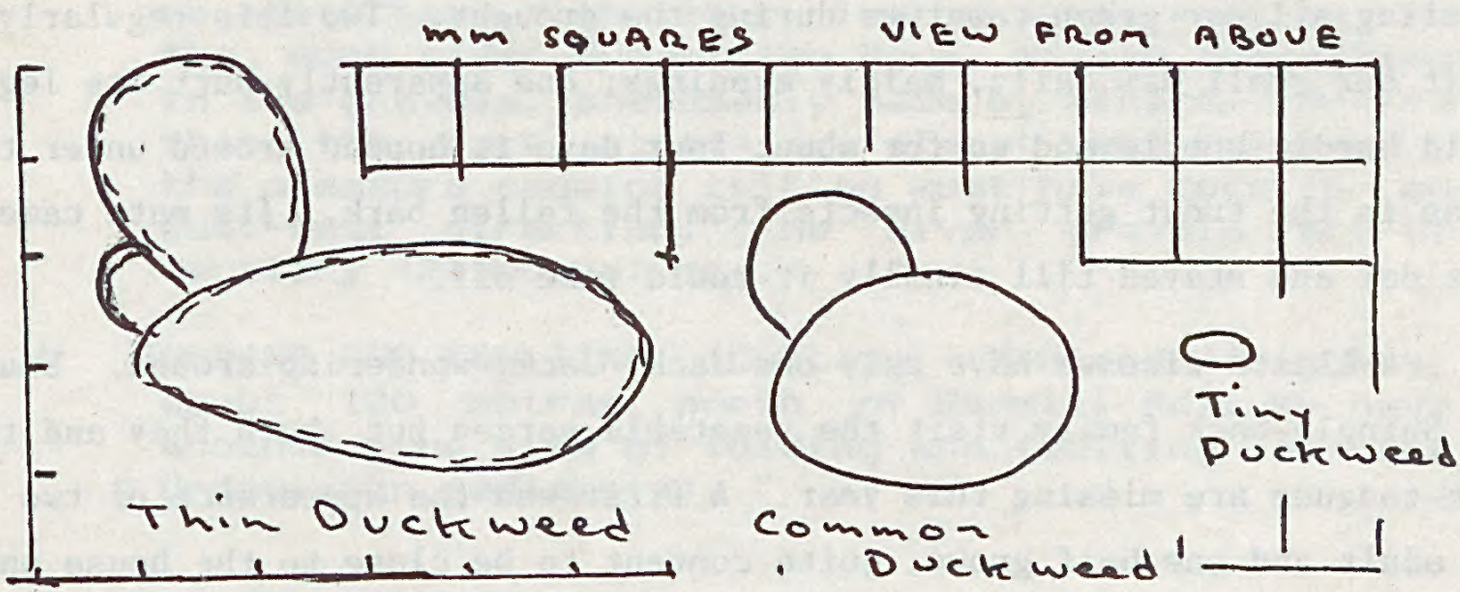


Geology Tour March 9



Local Duckweeds



CAMPBELLS CREEK NEWS Jan-Feb 1985

from Terry Collins

Once again a long dry spell and it still amazes me how our bushland survives on such poor soils. On the hillside above the house even some small plants have sent out green shoots. Where does the moistur come from, or are they like a bulb holding moisture in their root systems and time triggers their annual rejuvenation regardless of weather. Main interest was the large influx of various birds less than two days after th bushfires around Majorca and Talbot. A flock of approx. 80 Wattle-birds made our area home for nearly three weeks. The noise was such that they seemed to be fighting all the time. Gradually they moved on and now barely one is around. A never-ending stream of little birds had us fillin the bird baths three or four times a day, but they also have moved on leaving us with our regulars. I take it that they are our regulars as the seem to know their way around. Little yellow Thornbills, Blue Wrens, Spinebills, Yellow-faced, White-eared Honeyeaters, Willie Wagtails, Black-faced Cuckoo-Shrikes, Grey Fantails, Silver-eyes and our four Bronze-wing Pigeons. A flock of Choughs move through the hill every day a it is two years since they were here. This flock is small compared with the last. Our Grey Currawongs are back about 8 or 9 hunting insects under the bark on trees. Very trusting and friendly and we have forgiven them f stealing all our green tomatoes during the drought. Two Ibis regularly visit our small dam daily, mainly evenings; one apparently hurt its leg an could hardly hobble and so for about four days it hopped around under the trees in the front getting insects from the fallen bark. Its mate came next day and stayed till finally it could take off.

Lizard-wise we have only one Jacky Jacky wandering around. Usuall the Shingle-back family visit the vegetable garden but both they and the Blue-tongues are missing this year. A first was the appearance of two har one adult and one half grown, quite content to be close to the house and

GEOLOGY TOUR

1 HIGH LEVEL TERTIARY GRAVELS. (Cnr Kennedy and Lyttleton St). The rounded pebbles show that this was formerly (perhaps 6 million years ago) the bed of Barkers Creek. The creek has changed course, and its level is now well below that of these gravels. A thinner layer can be seen at the Uniting Church entrance. Often these gravels were goldbearing and so have been extensively mined.

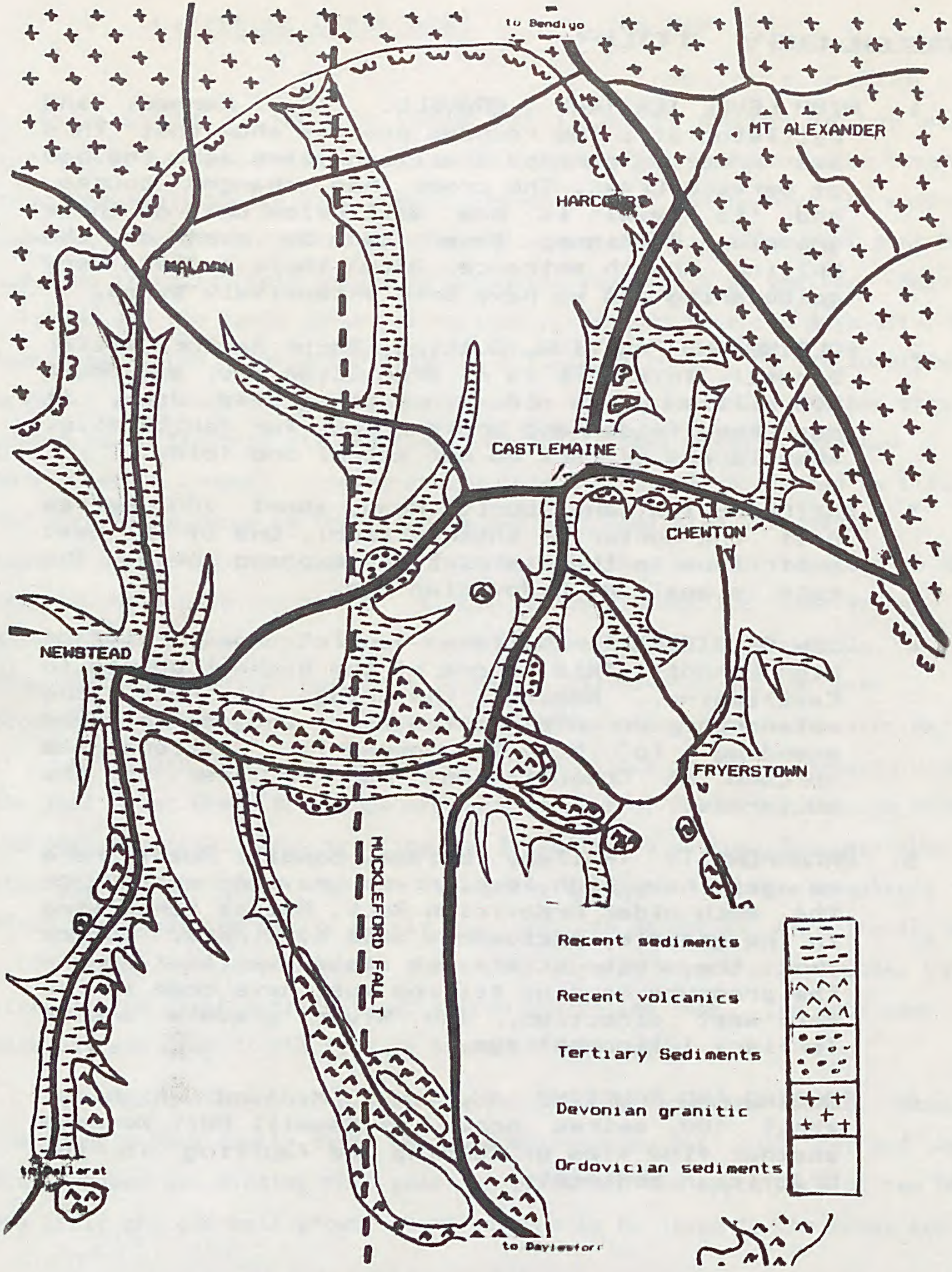
2 FOLDING AND FAULTING.(Cutting, Bacon Factory,Walker Street). This rock is of Ordovician Age, and about 500 million years old. Since being laid down, it has been folded and broken. Look for faults (i.e. when layers of rock do not match) and folds.

3 ANTICLINE (Kalimna Tourist Road, about 100 metres past the Hunter St intersection). One of the best anticlines in the district is exposed here. The rock is again of Ordovician age.

4 VIEW OF DISTRICT (Kalimna Tourist Road, east of High School). This is one of the highest points in Castlemaine. Notice the ridge of rock (the metamorphic aureole) to the east and north, and exending to Mt Tarrengower). Castlemaine's volcano, Mt Consultation, can be seen to the south-west.

5 UNCONFORMITY (Railway bridge, Sawmill Road). Here we again have high level river gravels resting on the much older Ordovician Rock. Notice tunnelling in the gravels, presumably made by miners. Notice that the rock strata are almost vertical here - the pressure causing tilting must have come in an east-west direction. The River gravels are of Tertiary (Pliocene) age.

6 FOLDING AND FAULTING (Cutting, Midland highway, about 100 metres north of Sawmill Rd). We have another fine view of folding and faulting in the Ordovician sediments).


to Bendigo
MT ALEXANDER
HARCOURT
MALDEN
CASTLEMAINE
CHEWTON
NEWSTEAD
FRYERSTOWN
MUCKLEFORD FAULT
to Ballarat
to Daylesford
Recent sediments
Recent volcanics
Tertiary Sediments
Devonian granitic
Ordovician sediments

7 SLATE QUARRY (Specimen Gully Road, Barkers Creek) Here we are close to the join of the Ordovician Rock and the granite; the sediments were baked, and so hardened, by the molten granite. Some layers are much more suitable for paving etc than others.

8 DISCOVERY OF GOLD MONUMENT (Specimen Gully Road). The monument commemorates the discovery of gold in the district. Notice that the road past here becomes quite steep - a result of the hardening of the rock here, and its resistance to erosion.

9 METAMORPHIC AUREOLE (Specimen Gully Road at its highest point) This ridge of baked rock is called a Metamorphic Aureole, and is displayed very well here. The ridge continues to Mt Tarrengower in one direction also south to Taradale and beyond. Notice that granitic and sedimentary rocks can be seen on the surface. Notice too the quite different aspect of the granite country to the east. (Strictly, Mt Alexander is not made of granite, but of granodiorite,which has a different chemical composition)

10 ROAD TO FARADAY From the highway the aureole can clearly be seen. Mostly the garanitic soil has been cleared. It is interesting to note that this rock was originally at least 2 kilometres below the surface!

11 GRANITE/ORDOVICIAN JOIN The join of the two rock types can be seen along the Faraday-Chewton Road. Past this we come to steeper country as we again cross the Aureole. Notice the rather steep valley cut by Forest Creek here.

12 FOREST CREEK VALLEY The valley was formerly rather recent sediments, deposited by Forest Creek when in flood. The area has been extensively mined, and much of the soil has been washed away to leave a rather infertile area. Gorse was originally planted here to help control erosion.

13 RAILWAY CUTTING All of the cuttings, from the tunnel through to Castlemaine are of interest. A separate excurson is really needed to see them all. The area near the Chewton Tip and also the cutting near the Railway Avenue Bridge are particularly noteworthy. Anticlines, synclines, faulting and dykes (where veins of material have filled up cracks in the rock) can all be seen.

14 FOREST CREEK CUTTING,CHEWTON (Road to Garfield Wheel, opposite sports ground). The creek cutting has an excellent example of an anticline. A close examination of the strata here shows a variety of ripples etc.

15 HIGH LEVEL GRAVELS Some fine examples of high level river gravels (the ancient Forest Creek bed) can be seen on the south side of the highway (e.g. at the Pistol Club). Again, these have been extensively mined and are often extensively eroded. Behind the stadium/sports ground, an unconformity is well displayed. Again, the Tertiary gravels are resting on the Ordovician bedrock)

16 ANOTHER ROCK This is the final stop, just behind the Wesley Hill hall, to see the most recent of Castlemaine's famous rocks.

DUCKWEEDS AT CAMPBELLS CK.

When Cliff Beauglehole published his plant list for the North Central Area in 1982, only one Duckweed (the Common Duckweed) was listed, and then only for Two-Tree Swamp (between Corop and Rushworth).

Duckweeds are interesting plants; they float on water, and may cover the surface completely. Depending on the kind, the whole plant is less than half a centimetre in length, and some are less than a millimetre. Despite this tiny size, they have flowers, to make them the smallest of all flowering plants. It is rare to see them in flower however, and they usually multiply by budding, and it is very common to see several still joined together.

Recently, in an article in Whirrakee, Don Franklin of the Bendigo Field Naturalists Club described the discovery of two more species in the Bendigo area.

This year, I noticed a thick layer of Duckweed at Campbells Creek and found that all three species found at Bendigo were present

A key to the species (based in part on the key given by Don Franklin) is:-

Minute plants, often 1 millimetre or less,floating with just the oval-shaped top surface exposed (rather like an iceberg), always rootless,single or several joined together TINY DUCKWEED (Wolffia australiana)

Plants flat and thin, often 2-3 mm in width, never with more than 1 root from the lower surface, a uniform green all over,single or in pairs or threes COMMON DUCKWEED (Lemna minor)

Plants flat and thin, up to 5 mm in width,often with two or more roots,has some brownish/purple coloration at the rim of the disc and underneath, single or inpairs or threes THIN DUCKWEED (Spirodela oligorhizza)

As the Duckweeds float, they must be carried downstream, and so must be present in the Loddon and Cairn Curran and further. Members are asked to look for Duckweeds. Probably they are quite common and could be found anywhere where water lies.Collect some in a bottle or plastic bag for identification. We could find even more than the three found so far!

Campbells Ck News (Contd. from p.2)

so far no damage from them, but not so our Happy Valley members who are busy putting up wire netting around their shrubs for their family of hares are very partial to all sorts of plants. Our only native with flowers at this time is a Leptospermum, (Lemon-scented).
The white flowers do not attract any Honeyeaters who seem to rely on the bird bottle.

CASTLEMAINE F.N.C. AGENDA

Frid 8 March. CASTLEMAINE GEOLOGY by E Perkins. 8 p.m. at High School, room 309

Sat 9 March. GEOLOGY TOUR Excursion to Castlemaine, Barkers Creek, Faraday and Chewton. Meet S.E.C, Mostyn St at 1.30

Sunday 17 March. CASTLEMAINE GEOLOGY. Excursion to Campbells Creek, organised by Bendigo F.N.C. Leader is Eric Wilkinson. Meet at S.E.C., Mostyn St at 2.00 p.m.

Friday 12 April. BIRDS. Speaker is Ellen McCulloch, from Bird Observers Club. 8 p.m. at High School.

Sat 13 April. YANDOIT Excursion to the Cox Property. Leader is Kaye Turner. Meet S.E.C. at 1.30.

Sat/Sun 20-21 April. PRINCETON. Western Victoria F.N.C. Association Campout at 'Kangaroobie',Princeton. Excursions to Pt Campbell,Melba Gully and Glow Worms, Princeton Swamp etc. Brochure avaialble.

Sat 11 May DEVIL'S KITCHEN Leave 10 a.m.

Frid 14 June. Guest speaker is Mr Allan Hartup

Sat 15 June. MELBOURNE ZOO All day bus trip.

August. BENDIGO - V.F.N.C.A campout.

Sat 14 Sept. MELVILLE CAVES

Fri/Sat/Sun 13-15 October. COLAC - W.V.F.N.C.A. Campout

Sun 20 Oct. BENDIGO WHIPSTICK - all day excursion with Maryborough F.N.C.

Sat 9 Nov. Excursion with Bird Observers Club..

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Membership fees for 1985 are:-

$4 Single membership	$6 Family membership
$2 Penshioner/student	$10 Supporting membership